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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/768,003

01/24/2001

Shinichi Takahashi

Q62765

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03/26/2004

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EXAMINER

CHU, KIM KWOK

ART UNIT

PAPER NUMBER

2653

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/768,003

Applicant(s)

TAKAHASHI, SHINICHI

Examiner

Kim-Kwok CHU

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 12/31/03 (paper 7).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8-14, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 5, 15 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**Response to Remarks**

1. Applicant's Remarks (paper 7) filed on December 31, 2003 have been fully considered but it is not persuasive.

(a) Applicant states that "the laser diodes 4 do not have common electrode and, accordingly, the light source 4 cannot be a one chip laser diode having a common electrode for the laser diodes" (page 12 of the Remarks, lines 13 and 14). Accordingly, in the cited reference Fig. 12 of Taniguchi, the laser diodes 4 are in a single chip 1 (column 3, lines 30-33; the single chip is the photodiode IC 1).

**Claim Rejections - 35 USC § 102**

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --  
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-4, 13, 14, 16 and 17 are rejected under 35 U.S.C. § 102(e) as being anticipated by Kawamura et al. (U.S. Patent 6,452,880).

Kawamura teaches an optical pickup apparatus for reading information from a plurality of types of discs at different reading wavelengths having all of the elements and means as recited in claims 1-4. For example, Kawamura teaches the following:

(a) as in claim 1, a light source 50 having a plurality of integrated light emitting portions 42, 43 for emitting laser beams of different wavelengths (Figs. 2 and 3);

(b) as in claim 1, the light source 50 being adapted to selectively emit one of the laser beams of different wavelengths (Figs. 2 and 3);

(c) as in claim 1, a photodetector 64 for detecting the laser beam (Fig. 2);

(d) as in claim 1, an optical system 54 for directing the laser beam emitted from the light source 50 to the disc 55 (Fig. 2);

(e) as in claim 1, the optical system 54 for directing the laser beam reflected by the disc to the photodetector 64 (Fig. 2);

(f) as in claim 1, the light source 50 is positioned such that a straight line connecting respective light emitting points

of the plurality of light emitting portions is coincident with a tangential line of a track on a disc to be reproduced (Fig. 2);

(g) as in claim 2, the optical system includes an astigmatism element for providing the laser beam with astigmatism (Fig 8; column 9, lines 32-47);

(h) as in claim 2, the photodetector 64 includes a plurality of four-division light receiving sections arranged corresponding to each of the plurality of laser beams of different wavelengths, and is configured such that central division lines of the four-division light receiving sections are in alignment with one another (Fig. 7);

(i) as in claim 2, the photodetector 64 is disposed such that the central division lines are coincident with the tangential line of the track (Fig. 7; reflected light spots are received at the center of the photodetecting elements);

(j) as in claim 3, the optical system 54 includes an astigmatism element 56 for providing the laser beam with astigmatism, and a diffraction element 54 for generating a pair of subbeams from the laser beam (Figs. 2 and 10A-10C; column 8, lines 43-46);

(k) as in claim 3, the plurality of four-division light receiving sections 61, 62 are arranged in correspondence to each of the plurality of laser beams of different wavelengths, and

further arranged such that central division lines thereof are in alignment with one another (Fig. 7);

(l) as in claim 4, the optical system 54 includes an astigmatism element 56 for providing the laser beam with astigmatism, and a diffraction element 54 for generating a pair of subbeams from said laser beam (Figs 2 and 10A-10C);

(m) as in claim 4, the plurality of four-division light receiving sections are arranged in correspondence to each of the plurality of laser beams of different wavelengths, and further arranged such that central division lines thereof are in alignment with one another (Fig. 7); and

(n) as in claim 4, the subbeam receiving sections are formed with regions which can receive all subbeams generated from all the laser beams of different wavelengths emitted from the light source (Fig. 7).

4. Claims 13, 14, 16 and 17 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. Claim 17, however also recites the following limitations which are taught by the prior art of Kawamura:

(a) as in claim 17, the light source is a one-chip laser diode which is formed with one electrode as a common electrode for said plurality of light emitting portions (Fig. ; column 6, lines 48-50).

5. Claim 6 is rejected under 35 U.S.C. § 102(e) as being anticipated by Taniguchi et al. (U.S. Patent 6,091,698).

Taniguchi teaches an optical pickup apparatus for reading information from a plurality of types of discs at different reading wavelengths having all of the elements and means as recited in claim 6. For example, Taniguchi teaches the following:

(a) as in claim 6, a light source 1 having a plurality of integrated light emitting portions 4 for emitting laser beams of different wavelengths (Fig. 7; column 5, lines 2-13);

(b) as in claim 6, the light source 4 being adapted to selectively emit one of the laser beams of different wavelengths (Fig. 7; column 5, lines 2-13);

(c) as in claim 6, a photodetector PD1, PD2 for detecting the laser beam (Fig. 7);

(d) as in claim 6, an optical system 2 for directing the laser beam emitted from the light source 4 to the disc D (Fig. 5);

(e) as in claim 6, the optical system 2 for directing the laser beam reflected by the disc to the photodetector PD1, PD2 (Fig. 5);

(f) as in claim 6, the light source 4 is positioned such that a straight line connecting respective light emitting points of the plurality of light emitting portions is coincident with a

tangential line of a track on a disc to be reproduced (Fig. 7);  
and

(g) as in claim 6, the light source 4 is a one-chip laser diode which is formed with one electrode as a common electrode for the plurality of light emitting portions (Fig. 7).

6. Claim 8 is rejected under 35 U.S.C. § 102(e) as being anticipated by Ohyama (U.S. Patent 6,366,548).

Ohyama teaches an optical pickup apparatus for reading information from a plurality of types of discs at different reading wavelengths having all of the elements and means as recited in claim 8. For example, Ohyama teaches the following:

(a) as in claim 8, a photodetector comprising a pair of subbeam receiving sections 3a, 3b, 4a, 4b disposed one after the other in a direction in which central division lines extend, for receiving subbeams (Figs. 3, 4A and 4B); and

(b) as in claim 8, the subbeam receiving sections 3a, 3b, 4a, 4b being formed with regions which can receive all subbeams generated from all the laser beams of different wavelengths emitted from the light source 8, 9 (Figs. 3, 4A and 4B).



7. Claims 9-12 are rejected under 35 U.S.C. § 102(e) as being anticipated by Kawamura et al. (U.S. Patent 6,452,880).

Kawamura teaches an optical pickup apparatus for reading information from a plurality of types of discs at different reading wavelengths having all of the elements and means as recited in claims 9-12. For example, Kawamura teaches the following:

(a) as in claim 9, an optical system operable to direct a selected laser beam towards an object disc (Fig. 1);

(b) as in claim 9, a photodetector operable to detect a reflected laser beam reflected from the object disc (Fig. 7); and

(c) as in claim 9, the photodetector comprising a plurality of subbeam receiving sections 63a, 63b and a plurality of four - division light receiving sections 61, 62 (Fig. 7);

(d) as in claim 10, each of the subbeam receiving sections of the photodetector is operable to receive subbeams of each of the laser beams having different respective wavelengths (Fig. 7);

(e) as in claim 11, the subbeam receiving sections 63a, 63b of the photodetector are operable to generate tracking error TE signals corresponding to the laser beams (Figs. 7 and 11; column 9, lines 25 and 26); and

(f) as in claim 12, each of the four division light receiving sections 61, 62 corresponds to a single laser beam having a respective wavelength and is operable to receive a main

portion of the corresponding laser beam and generate a read signal and a focus error signal FE for the corresponding laser beam (Figs. 7 and 11).

***Allowable Subject Matter***

8. Claim 7 is allowable over prior art.

9. Claims 5, 15 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claims 5 and 15, the prior art of record fails to teach or fairly suggest a photodetector includes the following features:

(a) further two divisional regions of the four-division light receiving section for receiving an arbitrary laser beam serve as two divisional regions of a four-division light receiving section for receiving a laser beam of a different wavelength from that of said arbitrary laser beam; and

(b) the remaining two divisional regions other than said two divisional regions are also used as a subbeam receiving section for receiving the subbeam.

As in claims 7 and 18, the prior art of record fails to teach or fairly suggest a photodetector includes the following features:

(a) a plurality of four-division light receiving sections arranged such that one of the subbeams is received by a different four-division light receiving section adjacent to a four division light receiving section which receives a selected laser beam.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

11. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C.  
20231 Or faxed to:

(703) 872-9306 (for formal communications intended for  
entry. Or:

(703) 746-6909, (for informal or draft communications,  
please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park  
II, 2021 Crystal Drive, Arlington. VA., Sixth Floor  
(Receptionist).

Any inquiry of a general nature or relating to the status of  
this application should be directed to the Group receptionist  
whose telephone number is (703) 305-4700.

Any inquiry concerning this communication or earlier  
communications from the examiner should be directed to Kim CHU  
whose telephone number is (703) 305-3032 between 9:30 am to 6:00  
pm, Monday to Friday.

kc 3/18/04

Kim-Kwok CHU  
Examiner AU2653  
March 18, 2004

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